

REMARKS

The Applicants greatly appreciate the swift and courteous Office Action.

Claims 1-3, 6, 7, 10-13, 16, 17 and 20-24 are pending in the application.

Claims 1-3, 6, 7, 10-13, 16, 17 and 20 stand rejected. Claims 1, 7, 11, and 17 are amended. Dependent claims 21-24 are added. No new matter is added. Applicant respectfully requests reconsideration in view of the amendment and further in view of the following remarks.

The Applicants also greatly appreciate the Examiner's time in the brief telephonic interview of 19 October 2005 where it was discovered that the Office Action mailed October 6, 2005 was inadvertently duplicative of the Office Action mailed May 5, 2005, and that the Examiner would remail the Action which is the instant October 24, 2005 Action. The Applicants have reviewed the Examiner's Interview Summary for the telephonic interview of 19 October 2005 and agree completely with it and incorporate it herein by reference.

Rejection Under 35 U.S.C. §102(f) over Jovancicevic, et al.

The Examiner has rejected claims 1-3, 6-7, 10-13, 16-17 and 20 under 35 U.S.C. §102(f) because allegedly the Applicants did not invent the claimed subject matter. The Examiner contends that 1-3, 6-7, 10-13, 16-17 and 20 are not patentably distinct from claims 1-2, 4-5, 6, 8-10, 12-14, and 16 of currently commonly owned Baker Hughes Incorporated, Jovancicevic, et al. U.S. Pat. No. 6,774,094. Specifically, the Examiner contends that the claims are generic to the use of polycarboxylic acid (col. 2, lines 65 et seq.) and salts thereof (col. 3, lines 21, et seq. particularly line 66). Thus, the Examiner alleges that Jovancicevic, et al. '094 anticipates the instant invention under 35 U.S.C. §102(f).

The Applicants must respectfully traverse.

A patent claim is anticipated, and therefore invalid, only when a single prior art reference discloses each and every limitation of the claim. *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047, 34 U.S.P.Q.2d 1565 (Fed. Cir.), *cert. denied*, 116 S.Ct. 516 (1995).

The subject application claims a method of reducing drag of a fluid, comprising providing a fluid; and adding to the fluid an amount of an additive effective to reduce the drag of the fluid, the additive being selected from the group consisting of amine salts selected from the group consisting of imidazoline salts of; primary, secondary and tertiary amine salts of; heterocyclic amine salts of *maleated* fatty acids, and *maleated* fatty acid esters; and inorganic and organic salts of *maleated* fatty acids, and *maleated* fatty acid esters and mixtures thereof (claims 1-3, 6-7, 10, and 21-22), and fluids so inhibited (claims 11-13, 16-17, 20, and 23-24).

It is respectfully submitted that Jovancicevic, et al. '094 does not teach or suggest or hint using the recited salts of *maleated* fatty acids, and *maleated* fatty acid esters. For this reason alone, the single prior art reference does not disclose each and every limitation of the claim. For this reason, the subject 35 U.S.C. §102(f) must fall. To the extent the instant claims are obvious from Jovancicevic, et al. '094 for reasons of double patenting, the terminal disclaimer, accepted by the Examiner in the October 24, 2005 Action, obviates such rejection. Reconsideration is respectfully requested.

Rejection Under 35 U.S.C. §103(a) over Knox, et al. in view of Fischer, et al.

The Examiner has rejected claims 1-3, 6-7, 10-13, 16-17 and 20 under 35 U.S.C. §103(a) as allegedly being unpatentable over Knox et al., U.S. Pat. No. 4,927,669 in view of Fischer, et al. U.S. Pat. No. 5,292,480.

The Examiner finds that Knox et al. discloses adding maleated fatty acids neutralized with imidazoline (amine) to a fluid in an amount of 750 and 6000 ppm of said fluid. The drag reducing function and an amount of the additive effective to reduce drag would have allegedly been inherent to the methods and compositions of Knox et al. since the methods and compositions are contended to read on and otherwise anticipate by the additive and the addition thereof, i.e., method steps and concentrations read on their use as corrosion inhibitor. The Examiner finds that the instant claims do and the instant disclosure does not preclude the inherent function of the instant claims from the ability to perform a corrosion inhibiting function as well as a drag reducing function.

The Examiner additionally contends that the relationship of the drag reduction as a function of concentration would have been expected to have at least a minimum threshold to function, which would be above 100 ppm as the lower limit claimed. The Examiner asserts that the relationship would be expected result in decreasing drag with increasing agent concentration to a maximum threshold. The Examiner notes that the claims require a reduction in drag and an effective amount to achieve said reduction. Since the reference adds the same agent at the upper end of Applicants' concentration range, the Examiner alleges that it is reasonable to conclude that said concentration is inherently an effective amount to reduce drag.

To the extent the 750 ppm does not include the amount of imidazoline base, the Examiner asserts that a stoichiometric amount of imidazoline base (MW ~70) would result for a maleated fatty acid (MW ~400) in a concentration of less than 1000 ppm claimed ($750 \text{ gm/kg} / 400 \text{ gm/mol MW Acid} \times 470 \text{ gm/mol Acid} + \text{Base} \sim 880 \text{ ppm}$).

The Examiner admits that Knox et al. *differs* from the claims in the requirement that the addition be continuous.

The Examiner finds that Fischer, et al. discloses related acid anhydride esters as corrosion inhibitors for oil field down hole use. The Examiner notes that Fischer, et al. in columns 8 and 12 shows that the continuous addition of corrosion inhibitors in down hole applications employing the Knox et al. class of corrosion inhibitors is known in the corrosion inhibiting art to those having ordinary skill in the art.

The Examiner finds that the references are combinable since they teach male-anized fatty acids as corrosion inhibitors in oil field down hole applications. The Examiner contends that it would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to add the corrosion inhibitors taught by Knox et al. continuously to maintain the corrosion protection in the oil field application shown to be conventional for said utility in the Fischer, et al. reference.

The Applicants must again respectfully traverse.

To support an obviousness rejection, the Examiner has the initial burden of establishing a *prima facie* case of obviousness of the pending claims over the cited prior art, *In re Oeticker*, 977 F.2d 1443, 1445; 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992).

The Applicants would respectfully direct the Examiner's attention to the amendments to all of the independent claims herein 1, 7, 11, and 17, from which all other claims depend and incorporate by reference, where the methods now recite that the amount of the additive added to the fluid based on the total amount of fluid ranges from about 150 to about 600 ppm, and the compositions recite the additive being added in an amount of from about 150 to about 600 ppm. Claims 21-24 have been added where this range is defined as from about 200 to about 500 ppm. Support for these amendments is found in the application as filed on page 6, paragraph [0022] lines 19-21, and thus these changes do not constitute improper insertions of new matter.

By contrast, however, Knox et al. only teaches and suggests using their corrosion inhibition formulations in the range of 750 to 6000 ppm, as the Examiner notes in Table I of the reference.

It is respectfully noted that the amounts given in Table I of Knox, et al. noted by the Examiner are these initial, one-time, batch, single dosage amounts consistent with customary corrosion inhibition procedures, and are not continuous applications as presently claimed. Further, these amounts are greater than those now recited in the amended claims. The Applicants further respectfully submit that the combination of Knox et al. with Fischer, et al. do not teach or suggest that the instantly claimed additives should be added *continuously* to the fluids treated in an amount of *from about 150 to about 600 ppm*.

Because neither Knox, et al. nor Fischer, et al. are connected with methods of providing drag reduction to the claimed fluids, they do not and cannot suggest or teach an effective proportion range for drag reduction for the explicitly claimed additives, much less the proportion range of from about 150 to about 600 ppm. Thus, it is respectfully submitted that the claims as amended are not obvious from the teachings of Knox, et al. and/or Fischer, et al. taken singly or together.

Further, although the Applicants stipulate that both references relate to corrosion inhibitors used in oil field down hole applications, it is respectfully submitted that there is no reasonable expectation that if the Knox et al. inhibitor formulations were added continuously as Fischer, et al. add theirs that the Knox, et al. inhibitor formulations would perform effectively. "The teaching or suggestion to make the claimed combination *and* reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991)." [MPEP §2143, emphasis added.]

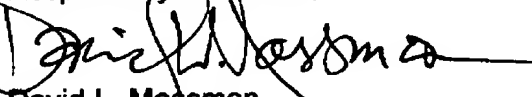
"Our reviewing courts have often advised the Patent and Trademark Office that it can satisfy the burden of establishing a *prima facie* case of obviousness *only* by showing some *objective* teaching in either the prior art, or knowledge generally available to one of ordinary skill in the art, that 'would lead' that individual 'to combine the relevant teachings in the references.' Accordingly, an examiner *cannot* establish obviousness by locating references which describe aspects of a patent applicant's invention without *also* providing *evidence of the motivating force which would impel one skilled in the art to do what the patent applicant has done.*" [Citations omitted; emphasis added.] *Ex parte Levengood*, 28 U.S.P.Q.2d 1300, 1302 (B.P.A.I. 1993).

The Applicants herein respectfully submit that there is no such reasonable expectation of success herein since there is nothing in the references that teaches, directs or impels that *the Knox et al. corrosion inhibition formulations* should be added *continuously*. Furthermore, there is no reasonable expectation or motivating force that would impel one having ordinary skill in the art to know the Knox et al. corrosion inhibition formulations would function as corrosion inhibitors or drag reducers when added *continuously* in an amount of additive *from about 150 to about 600 ppm* based on the total amount of fluid, or impel such one to practice such a method.

As such, since the combination of the references does not teach or suggest the limitations of the claims, as amended, for all of these reasons, the rejection must fall. It is respectfully submitted that a *prima facie* obviousness rejection has not been made. Reconsideration is respectfully requested.

It is respectfully submitted that the amendments and arguments presented above overcome all of the rejections. Reconsideration and allowance of the claims are respectfully requested. The Examiner is respectfully reminded of his duty to indicate allowable subject matter. The Examiner is invited to call the Applicants' attorney at the number below for any reason, especially any reason that may help advance the prosecution.

Respectfully submitted,



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